

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): A high-frequency dielectric heating device for heat-treating a material to be heated, comprising:

a microwave output unit including:

an inverter unit for inverting a direct current into an alternating current of a predetermined frequency by switching a semiconductor switching element by using an inverter control circuit,

heat-radiating fins on which the semiconductor switching element is mounted to radiate the heat generated by the semiconductor switching element,

a printed board having a thermistor for detecting the temperature of the semiconductor switching element, the thermistor being soldered to a leg portion of the semiconductor switching element or near to the leg portion thereof on the side of the soldering surface of the printed board,

a booster transformer for boosting the output voltage of the inverter unit,

a high-voltage rectifier unit for doubling and rectifying the output voltage of the booster transformer, and

a magnetron for radiating the output of the high-voltage rectifier unit as microwaves; and

a heat-cooking chamber fed with microwaves radiated from the magnetron,

wherein the inverter unit has a power-down control function for permitting the output power of the inverter unit to vary depending upon the resistance of the thermistor after the start of the magnetron.

Claim 2 (original): A high-frequency dielectric heating device for heat-treating a material to be heated, comprising:

a microwave output unit including:

an inverter unit for inverting a direct current into an alternating current of a predetermined frequency by switching a semiconductor switching element by using an inverter control circuit,

heat-radiating fins on which the semiconductor switching element is mounted to radiate the heat generated by the semiconductor switching element,

a printed board having a thermistor for detecting the temperature of the semiconductor switching element, the thermistor being soldered to a leg portion of the semiconductor switching element or near to the leg portion thereof on the side of the soldering surface of the printed board,

a booster transformer for boosting the output voltage of the inverter unit,

a high-voltage rectifier unit for doubling and rectifying the output voltage of the booster transformer, and

a magnetron for radiating the output of the high-voltage rectifier unit as microwaves; and

a heat-cooking chamber fed with microwaves radiated from the magnetron,

wherein the inverter unit has a power-down control function for decreasing the output power of the inverter unit down to a predetermined value when the thermistor has assumed a predetermined resistance.

Claim 3 (original): The high-frequency dielectric heating device according to claim 2,

wherein the inverter unit is provided with a start control circuit which, at the start of the magnetron, controls the collector voltage of the semiconductor switching element to be lower than that of during the steady-state operation, and the start control circuit is utilized when the output power of the inverter unit is to be decreased down to a predetermined value.

Claim 4 (original): A high-frequency dielectric heating device for heat-treating a material to be heated, comprising:

a microwave output unit including:

an inverter unit for inverting a direct current into an alternating current of a predetermined frequency by switching a semiconductor switching element by using an inverter control circuit,

heat-radiating fins on which the semiconductor switching element is mounted to radiate the heat generated by the semiconductor switching element,

a printed board having a thermistor for detecting the temperature of the semiconductor switching element, the thermistor being soldered to a leg portion of the semiconductor switching element or near to the leg portion thereof on the side of the soldering surface of the printed board,

a booster transformer for boosting the output voltage of the inverter unit,

a high-voltage rectifier unit for doubling and rectifying the output voltage of the booster transformer, and

a magnetron for radiating the output of the high-voltage rectifier unit as microwaves; and

a heat-cooking chamber fed with microwaves radiated from the magnetron,

wherein the inverter unit has a power-down control function for decreasing the output power of the inverter unit down to a predetermined value when the thermistor has assumed a predetermined resistance and, then, for permitting the output power of the inverter unit to vary depending upon the resistance of the thermistor.

Claim 5 (original): The high-frequency dielectric heating device according to any one of claims 1 to 4,

wherein the output power of the inverter unit is decreased down to a predetermined value when the thermistor has assumed the predetermined resistance.

Claim 6 (original): A printed board with a thermistor comprising:

an inverter unit for inverting a direct current into an alternating current of a predetermined frequency by switching a semiconductor switching element;

heat-radiating fins on which the semiconductor switching element is mounted to radiate the heat generated by the semiconductor switching element; and

a thermistor for detecting the temperature of the switching element,

wherein the thermistor is soldered to a leg portion of the switching element or near to the leg portion thereof

exposed on the side of the soldering surface of the printed board.

Claim 7 (original): The printed board with a thermistor according to claim 6,

wherein the semiconductor switching element is an insulated gate bipolar transistor.

Claim 8 (original): The printed board with a thermistor according to claim 7,

wherein the leg portion is an emitter leg of the insulated gate bipolar transistor.

Claim 9 (original): The printed board with a thermistor according to any one of claims 6 to 8,

wherein the thermistor is a chip thermistor.

Claim 10 (currently amended): A high-frequency dielectric heating device for heat-treating a material to be heated, comprising:

a microwave output unit including:

a printed board mounting an inverter unit,

heat-radiating fins and a thermistor,

a booster transformer for boosting the output voltage of the inverter unit,

a high-voltage rectifier unit for doubling and rectifying the output voltage of the booster transformer, and

a magnetron for radiating the output of the high-voltage rectifier unit as microwaves; and

a heat-cooking chamber for containing a material to be heated thereby to heat-treat the material to be heated by feeding the microwaves radiated from the magnetron into the heat-cooking chamber,

wherein the inverter unit is the one mounted on a printed board with a thermistor according to ~~any one of claims 6 to 9~~claim 6.